



The Oaks at Murray Farm
Stormwater Supplemental Information

As part of the Oaks at Murry Farm project, and any other project in the county, the applicant understands the sensitivity and importance in both controlling the stormwater runoff from our site and maintaining the existing drainage patterns from our adjacent properties. To that end, we have performed the necessary on the ground surveying, investigation, soil testing, wetland delineation and meeting with landowners that live in this area to determine the most advantageous design to meet the points stated above. The applicant by its own accord is placing a condition on the site of controlling the runoff from the 10 inch – 24-hour storm (which is the 100 yr storm as defined by the New Hanover County Storm Water Design Manual), which is significantly greater than the County required 8.05 inch – 24-hour storm (which is the 25-yr event as defined by the New Hanover County Storm Water Design Manual). In addition, the current drainage ditch (creek) that flows through this property will not be filled in or cut off any existing drainage. The creek will only be piped minimally for the road crossing required for the site.

The stormwater will be controlled by a combination of wet detention ponds in the middle of the site and an infiltration basin on the eastern property line near Shiraz Way. The infiltration basin was chosen in that location based on the soils test performed by a registered soil scientist, his test yielded an infiltration rate that measured over 20 inches/hr which deems it a perfect site for infiltration (preliminary calculations have been run utilizing a 10 in/hr infiltration rate to remain conservative). As part of this infiltration device, strict specifications will be provided during the construction phase to maintain the natural soil parameters, ie, to not disturb the baseline soils which can cause such devices to not function in the manner intended. An operations and maintenance agreement will also be required to ensure continual maintenance after construction. The applicant in other developments has built such devices and has the experience and construction expertise to have such facilities function as intended.

During downstream outfall analysis, it was determined that there are some existing residential properties that have low elevations on their property without a true outfall. With this in mind the preliminary site plan has been adjusted to account for the stormwater management discharging to the three well defined outfall ditches (the two ditches through the middle of the property and the roadside swale along Porters Neck Rd). The existing runoff from the proposed development property to these low areas will effectively be reduced as the built-upon area from the development will be collected and conveyed to the stormwater control measures where it will be treated and over detained to meet the aforementioned requirements. For the downstream outfalls, the design team will analyze and coordinate information/findings with New Hanover County Engineering during the permitting process. However, with placing the 100 yr storm condition on the site, the downstream features will not be affected adversely by the construction of this site.

